

## ABSTRACT OF THE DISCLOSURE

An AFE device with adjustable bandwidth filtering functions includes an input buffer and an ADC, and the adjustable bandwidth filtering functions may be integrated in the ADC or the input buffer. When they are integrated in the ADC, a capacitor and a switch module in the ADC may implement the functions, wherein the capacitor originally samples and holds analog signals. The switch module includes a plurality of transistor switches connected in parallel, and one (or multiple ones connected in parallel) of the transistor switches may be selected, according to a selection code, as an equivalent resistor to be serially connected to the capacitor to form a filter circuit. The selection code may be a one-of-N code or a thermometer code.

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